

Abstract

Composite medical devices, such as catheters, or the like. In at least some embodiments, composite medical devices, and/or shafts for use therein, that can include a more flexible inner portion and a less flexible outer portion. In some embodiments, the composite elongate shaft can be constructed by forming a metallic outer portion including a first metallic material about a metallic inner portion including a second metallic material different from the first material. The second metallic material can be more flexible than the first metallic material. A segment of the metallic outer portion can then be removed from the composite shaft to expose a segment of the metallic inner portion.

As portions of the outer portion are removed, and/or portions of the inner portion are exposed, certain characteristics along the length of the shaft can be achieved. For example, portions of the shaft can be rendered more flexible by the removal of the outer portion to expose the inner portion. Additionally, portions of the shaft can be maintained and/or rendered less flexible, or stiffer, by allowing the outer portion to remain thereon.

As such, the composite elongate shaft can provide a shaft for a medical device that can include desired characteristics, such as flexibility, torqueability, or the like, along different portions of the shaft.